

WHAT IS CLAIMED IS

1. An ion doping apparatus, comprising:

a multi-apertured electrode provided with a large number of apertures, and disposed so as to irradiate a substrate with ion beams drawn out from the electrode while scanning the ion beams;

said electrode including at least one electrode aperture group which includes a plurality of electrode apertures, and individual electrode apertures of which are arranged having positional shifts in a direction orthogonal to a scan direction of the substrate.

2. An ion doping apparatus as defined in claim 1, wherein said large number of electrode apertures are sorted into a plurality of electrode aperture groups in accordance with densities of the beams of the individual electrode apertures.

3. An ion doping apparatus as defined in either of claims 1 and 2, wherein the electrode apertures constituting said each electrode aperture group are arranged so as to form arrays in the scan direction of the substrate, and the arrays of the electrode apertures are disposed so as to have a tilt relative to the scan direction of the substrate.

4. An ion doping apparatus, comprising:

a multi-apertured provided with a large number of apertures, and which disposed so as to irradiate a substrate with ion beams drawn out from the electrode while scanning ion beams;

the electrode apertures being arranged so as to form arrays each of which extends in a scan direction of the substrate, and which are disposed so as to have a tilt relative to the scan direction of the substrate.

5. A multi-apertured electrode for an ion doping apparatus, comprising:

a large number of electrode apertures which serve to draw out an ion beam of rectangular shape, as a whole;

a plurality of electrode apertures constituting at least one electrode aperture group, and being individually arranged with positional shifts in a direction of one pair of parallel latera of the rectangular shape.

6. A multi-apertured electrode for an ion doping apparatus as defined in claim 5, wherein said large number of electrode apertures are sorted into a plurality of electrode aperture groups in accordance with their densities of beams.

7. A multi-apertured electrode for an ion doping apparatus as defined in either of claims 5 and 6, wherein the electrode apertures constituting said each electrode aperture group are arranged so as to form arrays in a direction of the other pair of parallel latera of the rectangular shape, and the arrays of the electrode apertures are disposed so as to have a tilt relative to the direction of the other pair of parallel latera of the rectangular shape.

8. A multi-apertured electrode for an ion doping

apparatus, comprising:

a large number of electrode apertures which serve to draw out an ion beam of rectangular shape, as a whole;

said large number of electrode apertures being disposed so as to have a tilt relative to a direction of one pair of parallel latera of the rectangular shape.